

WHAT IS CLAIMED IS:

1. A ruminant direct fed microbial composition of matter comprising an acidosis inhibiting effective  
5 amount of *Propionibacterium* P-63.
2. The composition according to claim 1 further comprising an animal feed material.
3. The composition according to claim 2 wherein said animal feed material is selected from the  
10 group consisting of corn, dried grain, alfalfa, and corn meal and mixtures thereof.
4. The composition according to claim 1 further comprising additives selected from the group  
consisting of growth substrates, enzymes, sugars, carbohydrates, extracts and growth promoting  
micro-ingredients and mixtures thereof.
- 15 5. The composition according to claim 1 further comprising a lactic acid producing culture.
6. The composition according to claim 5 wherein said lactic acid producing culture is selected from  
the group consisting of *Lactobacillus acidophilus*; *Lactobacillus plantarum*; *Streptococcus*  
10 *faecium*; *Lactobacillus casei*; *Lactobacillus lactis*; *Lactobacillus enterii*; *Lactobacillus*  
*fermentum*; *Lactobacillus delbruckii*; *Lactobacillus helveticus*; *Lactobacillus curvatus*;  
*Lactobacillus brevis*; *Lactobacillus bulgaricus*; *Lactobacillus cellobiosus*; *Streptococcus lactis*;  
*Streptococcus thermophilus*; *Streptococcus cremoris*; *Streptococcus diacetylactis*;  
*Streptococcus intermedius*; *Bifidobacterium animalis*; *Bifidobacterium adolescentis*;  
5 *Bifidobacterium bifidum*; *Bifidobacterium infantis*; *Bifidobacterium longum*; *Bifidobacterium*  
*thermophilum*; *Pediococcus acidilactici*; and, *Pediococcus pentosaceus* and mixtures thereof.
7. The composition according to claim 6 wherein said lactic acid producing culture comprises  
*Lactobacillus acidophilus* ATCC 53545.

8. A swine direct fed microbial composition of matter comprising a scours inhibiting effective amount of *Propionibacterium* P-63.

9. The composition according to claim 8 further comprising an animal feed material.

10. The composition according to claim 9 wherein said animal feed material is selected from the group consisting of corn, dried grain, alfalfa, and corn meal and mixtures thereof.

11. The composition according to claim 8 further comprising additives selected from the group consisting of growth substrates, enzymes, sugars, carbohydrates, extracts and growth promoting micro-ingredients and mixtures thereof.

12. The composition according to claim 8 further comprising a lactic acid producing culture.

13. The composition according to claim 12 wherein said lactic acid producing culture is selected from the group consisting of *Lactobacillus acidophilus*; *Lactobacillus plantarum*; *Streptococcus faecium*; *Lactobacillus casei*; *Lactobacillus lactis*; *Lactobacillus enterii*; *Lactobacillus fermentum*; *Lactobacillus delbruckii*; *Lactobacillus helveticus*; *Lactobacillus curvatus*; *Lactobacillus brevis*; *Lactobacillus bulgaricus*; *Lactobacillus cellobiosus*; *Streptococcus lactis*; *Streptococcus thermophilus*; *Streptococcus cremoris*; *Streptococcus diacetylactis*; *Streptococcus intermedius*; *Bifidobacterium animalis*; *Bifidobacterium adolescentis*; *Bifidobacterium bifidum*; *Bifidobacterium infantis*; *Bifidobacterium longum*; *Bifidobacterium thermophilum*; *Pediococcus acidilactici*; and, *Pediococcus pentosaceus* and mixtures thereof.

14. The composition according to claim 13 wherein said lactic acid producing culture comprises *Lactobacillus acidophilus* ATCC 53545.

15. A process for reducing acidosis in ruminants when converting from a roughage diet to a grain diet comprising the step of administering to said ruminant an acidosis inhibiting effective amount of *Propionibacterium* P-63.

16. The process according to claim 15 wherein said acidosis inhibiting amount of *Propionibacterium* P-63 comprises between about  $1 \times 10^6$  cfu/animal/day to about  $1 \times 10^{12}$  cfu/animal/day.

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17. The process according to claim 16 wherein said acidosis inhibiting amount of *Propionibacterium* P-63 comprises between about  $1 \times 10^9$  cfu/animal/day to about  $1 \times 10^{12}$  cfu/animal/day.

10 18. The process according to claim 15 further comprising the step of administering to said ruminant a lactic acid producing culture.

19. The process according to claim 18 wherein said lactic acid producing culture is selected from the group consisting of *Lactobacillus acidophilus*; *Lactobacillus plantarum*; *Streptococcus faecium*; *Lactobacillus casei*; *Lactobacillus lactis*; *Lactobacillus enterii*; *Lactobacillus fermentum*; *Lactobacillus delbruckii*; *Lactobacillus helveticus*; *Lactobacillus curvatus*; *Lactobacillus brevis*; *Lactobacillus bulgaricus*; *Lactobacillus cellobiosus*; *Streptococcus lactis*; *Streptococcus thermophilus*; *Streptococcus cremoris*; *Streptococcus diacetylactis*; *Streptococcus intermedius*; *Bifidobacterium animalis*; *Bifidobacterium adolescentis*; *Bifidobacterium bifidum*; *Bifidobacterium infantis*; *Bifidobacterium longum*; *Bifidobacterium thermophilum*; *Pediococcus acidilactici*; and, *Pediococcus pentosaceus* and mixtures thereof.

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20. The process according to claim 19 wherein said lactic acid producing culture comprises *Lactobacillus acidophilus* ATCC 53545.

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21. The process according to claim 15 further comprising administering to said ruminant an animal feed material.

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22. The process according to claim 21 wherein said animal feed material is selected from the group consisting of corn, dried grain, alfalfa, and corn meal and mixtures thereof.

23. The process according to claim 15 further comprising the step of administering to said ruminant one or more additives selected from the group consisting of growth substrates, enzymes, sugars, carbohydrates, extracts and growth promoting micro-ingredients and mixtures thereof.

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24. The process according to claim 19 wherein said acidosis inhibiting amount of *Propionibacterium* P-63 comprises between about  $1 \times 10^6$  cfu/animal/day to about  $1 \times 10^8$  cfu/animal/day.

10 25. A process for reducing scours in swine comprising the step of administering to said swine a scour inhibiting effective amount of *Propionibacterium* P-63.

15 26. The process according to claim 25 wherein said scour inhibiting amount of *Propionibacterium* P-63 comprises between about  $1 \times 10^8$  cfu/animal/day to about  $1 \times 10^{12}$  cfu/animal/day.

27. The process according to claim 26 wherein said scour inhibiting amount of *Propionibacterium* P-63 comprises between about  $1 \times 10^9$  cfu/animal/day to about  $1 \times 10^{12}$  cfu/animal/day.

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28. The process according to claim 25 further comprising the step of administering to said swine a lactic acid producing culture.

25 29. The process according to claim 28 wherein said lactic acid producing culture is selected from the group consisting of *Lactobacillus acidophilus*; *Lactobacillus plantarum*; *Streptococcus faecium*; *Lactobacillus casei*; *Lactobacillus lactis*; *Lactobacillus enterii*; *Lactobacillus fermentum*; *Lactobacillus delbruckii*; *Lactobacillus helveticus*; *Lactobacillus curvatus*; *Lactobacillus brevis*; *Lactobacillus bulgaricus*; *Lactobacillus cellobiosus*; *Streptococcus lactis*; *Streptococcus thermophilus*; *Streptococcus cremoris*; *Streptococcus diacetylactis*;  
30 *Streptococcus intermedius*; *Bifidobacterium animalis*; *Bifidobacterium adolescentis*;

Bifidobacterium bifidum; Bifidobacterium infantis; Bifidobacterium longum; Bifidobacterium thermophilum; Pediococcus acidilactici; and, *Pediococcus pentosaceus* and mixtures thereof.

30. The process according to claim 29 wherein said lactic acid producing culture comprises  
5 *Lactobacillus acidophilus* ATCC 53545.

31. The process according to claim 25 further comprising administering to said swine an animal feed material.

10 32. The process according to claim 31 wherein said animal feed material is selected from the group consisting of corn, dried grain, alfalfa, and corn meal and mixtures thereof.

15 33. The process according to claim 25 further comprising the step of administering to said swine one or more additives selected from the group consisting of growth substrates, enzymes, sugars, carbohydrates, extracts and growth promoting micro-ingredients and mixtures thereof.

34. The process according to claim 29 wherein said scour inhibiting amount of Propionibacterium P-63 comprises between about  $1 \times 10^5$  cfu/animal/day to about  $1 \times 10^8$  cfu/animal/day.